

We claim:

1. A method of automatically setting a camera exposure level, comprising:  
generating a signature of a current ambient luminance level; and  
generating an exposure setting in response to said signature.

2. A method of automatically setting a camera exposure level according to claim 1,  
wherein said step of generating a signature of a current ambient luminance level includes:  
capturing an image indicative of said current ambient luminance level;  
sub-dividing the image into a plurality of image areas;  
5 determining for each image area whether its current ambient luminance level is about  
a predetermined gray level;  
assigning each image area a binary value indicative of whether a current ambient  
luminance level associated with a individual image area is about a predetermined Grey level;  
arranging the assigned binary values into a pointer; and  
10 following said pointer to an exposure setting level appropriate for capturing an object  
image reflecting the current ambient luminance level.

3. A method of automatically setting a camera exposure level according to claim 2,  
wherein said step of generating an exposure setting, includes:  
retrieving said exposure setting level; and  
setting a gain level indicative of a desired exposure setting.

4. A method of automatically setting a camera exposure level according to claim 2,  
wherein said step of sub-dividing the image into a plurality of image areas includes:  
arranging said plurality of image areas in a matrix.

5. A method of automatically setting a camera exposure level according to claim 2,  
wherein said step of sub-dividing the image into a plurality of image areas includes arranging  
said plurality of image areas into a strip of contiguous image areas.

6. A method of automatically setting a camera exposure level according to claim 2, wherein said step of sub-dividing the image into a plurality of image areas includes:  
arranging said plurality of image areas into sets of overlapping image areas.

7. A method of automatically setting a camera exposure level according to claim 6, wherein said sets of overlapping image areas are paired sets of overlapping image areas.

8. A method of automatically setting a camera exposure level according to claim 2, wherein said step of capturing includes:

passing said image indicative of said current ambient luminance level through a primary lens system, said primary lens being disposed in a portion of a primary light path;

5        passing said image indicative of said current ambient luminance level through a partially transmissive and partially reflective mirror, said mirror being disposed in another portion of said primary light path; and

converting the image passed through said mirror into an indication of said current ambient luminance level.

9. A method of automatically setting a camera exposure level according to claim 8, wherein said set of converting including:

establishing a threshold indication; and

5        moving said mirror out of said primary light path to permit the image to be converted without attenuation by said mirror.

10. A shutterless digital camera, comprising:

shutterless means for capturing a portion of an image indicative of a current ambient luminance level;

signature generating means for generating a signature of said current ambient luminance level; and

automatic means for generating an exposure setting in response to said signature.

11. A shutterless digital camera according to claim 10, wherein said shutterless means includes:

capturing means of converting light into an electrical signal indicative of said current ambient luminance level;

timing means for subdividing said electrical signal into a plurality of image area signals;

determining means responsive to individual ones of said plurality of image area signals for determining whether each individual image area signal is indicative of at least a predetermined gray scale luminance level;

binary means for assigning a binary one value to an individual one of said image area signals when the signal is indicative of at least a predetermined gray scale luminance level and for assigning a binary zero value to an individual one of said image area signals when the signal is not indicative of at least a predetermined gray scale luminance level;

pointer means for arranging the assigned binary values into a pointer; and

retrieving means responsive to said pointer for retrieving one of a plurality of different exposure setting levels, said one exposure setting level being an appropriate level for capturing an object image reflecting said current ambient luminance level.